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[File 9] Business & Industry(R) Jul/1994-2009/Jan 04

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[File 16] Gale Group PROMT(R) 1990-2009/Dec 18
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[File 20] Dialog Global Reporter 1997-2009/Jan 06

[File 47] Gale Group Magazine DB(TM) 1959-2009/Dec 30
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[File 75] TGG Management Contents(R) 86-2009/Dec W1

[File 80] TGG Aerospace/Def.Mkts(R) 1982-2009/Dec 15

[File 88] Gale Group Business A.R.T.S. 1976-2009/Jan 02

[File 98] General Sci Abs 1984-2008/Nov

[File 112] UBM Industry News 1998-2004/Jan 27
*File 112: This file is closed. For more recent UBM/CMP records, please search DIALOG
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[File 141] Readers Guide 1983-2008/Oct

[File 148] Gale Group Trade & Industry DB 1976-2008/Dec 22
*File 148: The CURRENT feature is not working in File 148. See HELP NEWS148.

[File 160] Gale Group PROMT(R) 1972-1989

[File 275] Gale Group Computer DB(TM) 1983-2009/Dec 15

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[File 331] Derwent WPI First View/UD=200879

[File 340] CLAIMS(R)/US Patent 1950-08/Dec 30

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[File 484] Periodical Abs Plustext 1986-2008/Nov W5

[File 553] Wilson Bus. Abs. 1982-2008/Dec

[File 570] Gale Group MARS(R) 1984-2009/Dec 18

[File 608] MCT Information Svc. 1992-2009/Jan 06

[File 620] EIU:Viewswire 2008/Dec 31

[File 613] PR Newswire 1999-2009/Jan 06
*File 613: File 613 now contains data from 5/99 forward. Archive data (1987-4/99) is available in File 813.

[File 621] Gale Group New Prod.Annou.(R) 1985-2009/Dec 03

[File 623] Business Week 1985-2009/Jan 06

[File 624] McGraw-Hill Publications 1985-2009/Jan 06

[File 634] San Jose Mercury Jun 1985-2009/Jan 03

[File 635] Business Dateline(R) 1985-2009/Jan 03

[File 636] Gale Group Newsletter DB(TM) 1987-2009/Dec 18

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CLAIMS(R)/US Patent
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10636451
E/METHOD AND SYSTEM TO PROVIDE A ROUTING PROTOCOL FOR WIRELESS
  DEVICES
Inventors:Chari Amalavoyal Narashima (US); Srikrishna
    Devabhaktuni (US)
Assignee: Unassigned Or Assigned To Individual
Assignee Code: 68000
Attorney, Agent or Firm: BLAKELY SOKOLOFF TAYLOR & ZAFMAN, 12400
    WILSHIRE BOULEVARD, SEVENTH FLOOR, LOS ANGELES, CA, 90025, US

Publication   Application
                    Number   Kind Date   Number   Date
                    -------------- -- -------- -------------- --------
                    US 20040143678 A1 20040722 US 2004754978
20040109
Division of: US 6704301   US 2000751262   20001229
Priority Applic: US 2004754978   20040109
                                          US 2000751262   20001229

Document Type:
Inventors:Chari Amalavoyal Narashima...

...Srikrishna Devabhaktuni

Abstract: A method and apparatus for generating connectivity is
described.
The method includes a server broadcasting a beacon including the
server's address. The method further includes each client that
receives...

Exemplary Claim:

D R A W I N G

    1. A method of wireless connectivity comprising: broadcasting a

beacon by a server; and receiving and storing the beacon at the
client,
    the...

Non-exemplary Claims:

...3. The method of claim 1, wherein the beacon broadcast by the
    server includes a hop-count set to zero, the method further
comprising:
    each...

...4. The method of claim 1, wherein the beacon broadcast by the
    server includes server address, such that each client receiving the
    beacon knows the...

...19. A server for wireless communications comprising: a beacon logic
to
    generate a beacon and broadcast the beacon; and a wireless
    transceiver to receive a plurality of reverse beacons, the
reverse...

...receiving a beacon from the server; rebroadcasting one beacon
received
    from an upstream node; and broadcasting a reverse beacon
    upstream, the reverse beacon being addressed to the known upstream
node,
    the...

...23. The method of claim 21, further comprising the server
    broadcasting a dummy reverse beacon to initiate the reverse
    beacon cycle...

...25. The method of claim 21, wherein receiving a reverse beacon
    broadcast by a client's default gateway triggers the client to
    start a timer to send...

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CLAIMS(R)/US Patent

04032470
E/(A1) METHOD AND APPARATUS TO PROVIDE A ROUTING PROTOCOL FOR
  WIRELESS DEVICES
  (B2) METHOD AND APPARATUS TO PROVIDE A ROUTING PROTOCOL FOR WIRELESS
  DEVICES
Inventors:Chari Amalavoyal Narasimha (US); Srikrishna
    Devabhaktuni (US)
Assignee: (A1) Unassigned Or Assigned To Individual
          (B2) Tropos Networks Inc
Assignee Code: (A1) 68000
Probable Assignee (A1): Tropos Networks Inc
Attorney, Agent or Firm: Blakely, Sokoloff, Taylor & Zafman LLP

Publication   Application
                   Number   Kind Date   Number   Date
                   -------------- -- -------- -------------- --------
                   US 20020107023 A1 20020808 US 2000751262
20001229
                   US 6704301   B2 20040309 US 2000751262 20001229

                   (Cited in 001 later patents)
Prior Publication: US 20020107023 A1 20020808
Priority Applic: US 2000751262 20001229
Calculated Expiration: 20201229
Notes: Subject to any Disclaimer, the term of this patent is extended
or
    adjusted under 35 USC 154(b) by 460 days.

Document Type:
Inventors:Chari Amalavoyal Narasimha...

...Srikrishna Devabhaktuni

Abstract: ...A method and apparatus for generating connectivity is
described. The method includes a server broadcasting a beacon
including the server's address. The method further includes each
client
that receives...

...A method and apparatus for generating connectivity is described.
The
method includes a server broadcasting a beacon including the
server's address. The method further includes each client that
receives...

Exemplary Claim:

...D R A W I N G

   1. A method of wireless connectivity comprising: broadcasting a
   beacon by a server; and receiving and storing the beacon at the
client,
   the...

...D R A W I N G

   1. A method of wireless connectivity comprising: broadcasting a
   beacon by a server; receiving and storing every beacon received by
a
   client, the...

Non-exemplary Claims:

...3. The method of claim 1, wherein the beacon broadcast by the
   server includes a hop-count set to zero, the method further
comprising:
   each...

...4. The method of claim 1, wherein the beacon broadcast by the
   server includes server address, such that each client receiving the
   beacon knows the...

...19. A server for wireless communications comprising: a beacon logic
to
   generate a beacon and broadcast the beacon; and a wireless
   transceiver to receive a plurality of reverse beacons, the
reverse...

...receiving a beacon from the server; rebroadcasting one beacon
received
   from an upstream node; and broadcasting a reverse beacon
   upstream, the reverse beacon being addressed to the known upstream
node,
   the...

...23. The method of claim 21, further comprising the server
   broadcasting a dummy reverse beacon to initiate the reverse
   beacon cycle...

...25. The method of claim 21, wherein receiving a reverse beacon
   broadcast by a client's default gateway triggers the client to
   start a timer to send...

...2. The method of claim 1, wherein the beacon broadcast by the
   server includes a hop-count set to zero, the method further
comprising:

each...

...3. The method of claim 1, wherein the beacon broadcast by the
server includes server address, such that each client receiving the
beacon knows the...

...10. A method of wireless connectivity comprising: broadcasting a
beacon by a server, the beacon including a sequence number
representing
a current routing...

...12. A method of wireless connectivity comprising: broadcasting a
beacon by a server, the beacon including a sequence number
representing
a current routing...

...17. A method of wireless connectivity comprising: broadcasting a
beacon by a server; and receiving and storing the beacon at the
client,
the...

...18. A method of wireless connectivity comprising: broadcasting a
beacon by a server; and receiving and storing the beacon at the
client,
the...

...receiving a beacon from the server; rebroadcasting one beacon
received
from an upstream node; and broadcasting a reverse beacon
upstream, the reverse beacon being addressed to the known upstream
node,
the...

...server and each client to set up a routing table; wherein receiving
a
reverse beacon broadcast by a client's default gateway triggers
the client to start a timer to send...

...receiving a beacon from the server; rebroadcasting one beacon
received
from an upstream node; and broadcasting a reverse beacon
upstream, the reverse beacon being addressed to the known upstream
node,
the...

...receiving a beacon from the server; rebroadcasting one beacon
received
from an upstream node; and broadcasting a reverse beacon
upstream, the reverse beacon being addressed to the known upstream
node,
the...

00944183
METHOD AND SYSTEM TO PROVIDE INCREASED DATA THROUGHPUT IN A
WIRELESS MULTI-HOP NETWORK
PROCEDE ET SYSTEME PERMETTANT D'AUGMENTER LE DEBIT DE DONNEES DANS
UN RESEAU SANS FIL A PLUSIEURS BONDS

Patent Applicant/Patent Assignee:

• FHP WIRELESS INC
    1730 South Amphlett Boulevard, Suite 114, San Mateo, CA 94402; US; US(Residence);
    US(Nationality); (For all designated states except: US)

Patent Applicant/Inventor:

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    (Designated only for: US)

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    IN(Nationality); (Designated only for: US)

• BEHROOZI Cyrus
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    only for: US)

• SRIKRISHNA Devabhaktuni... ...Designated only for: US)

• CHARI Amalavoyal...

Legal Representative:

• MALLIE Michael J(et al)(agent)
    Blakely, Sokoloff, Taylor & Zafman LLP 12400 Wilshire Boulevard, 7th Floor, Los Angeles,
    CA 90025; US;

	Country	Number	Kind	Date
Patent	WO	200278369	A1	20021003
Application	WO	2001US50272		20011219
Priorities	US	2001818423		20010326

Designated States: (Protection type is "Patent" unless otherwise stated - for applications prior to
2004)
AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG,
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NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE,
SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
UA, UG, US, UZ, VN, YU, ZA, ZM, ZW

[EP] AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;
GR; IE; IT; LU; MC; NL; PT; SE; TR;

[OA] BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW;
ML; MR; NE; SN; TD; TG;

[AP] GH; GM; KE; LS; MW; MZ; SD; SL; SZ; TZ;
UG; ZM; ZW;

[EA] AM; AZ; BY; KG; KZ; MD; RU; TJ; TM;

Detailed Description:

...data transmissions. For instance, a cell-phone transmission may be effectively distinguished from a TV broadcast because they occur on different frequency "channels." On the other hand, a data transmission on...at block I I 10, when the Channel Manager on the given node sends a broadcast message on the common channel (the channel used to send routing and other control information... ...testincy. All nodes that are not one hop downstream from the given node ignore the broadcast.

At block 1 1 15, the given, or originatin a, node, determines all channels that... ...necessary that the clocks on all the nodes be synchronized. The timing information in the broadcast, for one embodiment, is a relative offset from the current time, which may be different...was received at all, based on the node responses to the original acknowledgement to the broadcast. The Channel Manager uses this data to determine the quality of the downlink on that... ...channels for the downlink, at block II 50, the Channel Manager of the originating node broadcasts an AssiGnment Packet announcina its choice. Each of the nodes that is one hop downstream... ...assignments, if more than three channels are beiner used. Thus, for one embodiment, instead of broadcasting, Channel Manager may send a directed message to each node, assigning its channel.

At block...

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PCT FULLTEXT
00921179
METHOD AND SYSTEM TO PROVIDE A ROUTING PROTOCOL FOR WIRELESS DEVICES
PROCEDE ET SYSTEME PERMETTANT D'OBTENIR UN PROTOCOLE DE ROUTAGE DESTINE A DES DISPOSITIFS SANS FIL

Patent Applicant/Patent Assignee:

• FHP WIRELESS INC
   1730 South Amphlett Boulevard, Suite 114, San Mateo, CA 94402; US; US(Residence); US(Nationality); (For all designated states except: US)

Patent Applicant/Inventor:

• SRIKRISHNA Devabhaktuni
   63 Bovet Road #418, San Mateo, CA 94402; US; US(Residence); IN(Nationality); (Designated only for: US)

• CHARI Amalavoyal
   1730 S. Amphlett Boulevard, Suite 114, San Mateo, CA 94402; US; US(Residence); IN(Nationality); (Designated only for: US)

• SRIKRISHNA Devabhaktuni... ...Designated only for: US)

• CHARI Amalavoyal...

Legal Representative:

• MALLIE Michael J (et al)(agent)
   Blakely, Sokoloff, Taylor & Zafman LLP, 7th floor, 12400 Wilshire Boulevard, Los Angeles, CA 90025; US;

	Country	Number	Kind	Date
Patent	WO	200254646	A2-A3	20020711
Application	WO	2001US48215		20011212
Priorities	US	2000751262		20001229

Designated States: (Protection type is "Patent" unless otherwise stated - for applications prior to 2004)
AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG,
BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ,
DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP,
KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,

NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE,
SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,
UG, US, UZ, VN, YU, ZA, ZM, ZW

[EP] AT; BE; CH; CY; DE; DK; ES; FI; FR; GB;
GR; IE; IT; LU; MC; NL; PT; SE; TR;

[OA] BF; BJ; CF; CG; CI; CM; GA; GN; GQ; GW;
ML; MR; NE; SN; TD; TG;

[AP] GH; GM; KE; LS; MW; MZ; SD; SL; SZ; TZ;
UG; ZM; ZW;

[EA] AM; AZ; BY; KG; KZ; MD; RU; TJ; TM;

Publication Language: English
Filing Language: English
Fulltext word count: 13043

English Abstract:

...method and apparatus for generating connectivity is described. The method includes a server
(220A, 220B) broadcasting a beacon including the server's address. The method further includes
each client (230A-230G...

Detailed Description:

...protocol.

A method and apparatus for generating connectivity is described. The method includes a server
broadcasting a beacon including the server's address. The method further includes each client that
receives... ...reverse beacon.

Figure 7B is a flowchart of one embodiment of timing the reverse beacon
broadcast.

Figure 8A is a flowchart of one embodiment of using DRS to send client
connectivity...coupled to the server 220 through one or more
intermediate clients.

When a server 220 broadcasts a beacon, it is received by all first-level clients.

The beacon is used to... ...the fact that they receive data directly from the server. The first level
clients re-broadcast the beacon data,, attaching their own data to it.

This indicates to the second level... ...transmitted if its link quality is sufficiently high.

For another embodiment, the depth of re-broadcast is determined for the system.

Thus, for example, a client may rebroadcast a beacon only... ...of routes by the Clients. At periodic

intervals, the Server originates a 'Beacon" which is broadcast to all Clients within hearing range of the Server. The time interval between successive broadcasts of the Beacon defines a routing cycle. The Beacon is a routing packet a short... ...310 and H 330. For one embodiment, there is a means to ensure that the broadcast transmission is received. This will be discussed in more detail below. All such Clients 310... ...one embodiment, the delay is a random delay, such that not all Level One Clients broadcast at the same time. For one embodiment,,

the TMC data may be omitted. For one... ...Server, (2) an explicit route to the next upstream client (the Level One Client whose broadcast it received), 3) the full path to the server through the upstream Level One Client and 4) the TMCs of the Server and the Level One Client from whom the broadcast was received. For one embodiment, each Level Two Client now knows (1) that it has... ...also happen that one of the Level One Clients (say A) 310 may receive the broadcast of one of the other Level One Clients (say H) 330. Client A 310, because...discussed in more detail below.

For another embodiment, each node periodically initiates a reverse beacon broadcast. This period is the KEEPALIVE period. For one embodiment, the timing of the start of...one embodiment, beacons are sent out periodically.

In an alternate implementation, the periodicity of beacon broadcasts might be dynamically determined. For example, the periodicity may be determined based on network stability ...many minutes. For one embodiment, the beacons are sent out every minute. The beacon is broadcast by wireless transceiver 515 to all clients within range of the broadcast.

For one embodiment, the server 510 also receives a reverse beacon from the clients, indicating...For one embodiment, client 550 further includes reverse beacon logic 585.

Reverse beacon logic 585 broadcasts the path upwards to the client. For one embodiment, reverse beacon logic 585 is triggered... ...a list of all clients whose routes to the server pass through the client that broadcasts the reverse beacon to the server. Thus, the server receives a reverse beacon that contains... ...delay. For another embodiment, the TMC may not be calculated.

At block 625, the server broadcasts the beacon to all the clients. The beacon includes the server's own address and... ...whether it has received a beacon. For one embodiment, the client generally watches for all broadcasts, either directed to it, or directed to all clients. In this case, if the client detects the beacon, it continues to block 640. Otherwise, it continues waiting for a broadcast.

At block 640, the client determines whether other beacon(s) have been received in this... ...the server, and also has passed on its data to all other clients within its broadcast range. At this point, the client can await the next beacon. If the client has...its address. The reverse beacon is directed to the server. For one embodiment, the client broadcasts this data, addressed to its default gateway. Thus, all other nodes receiving the message would... ...The process starts at block 750. At block 755, client A receives a reverse beacon broadcast (RBB).

At block 760, the process determines whether the RBB is addressed to client A... ...process then continues to block 784, where the system waits to send its reverse beacon broadcast, now including this link. Note that the process shown in blocks 755, 760, 792, and... ...is advantageous.

At block 782, client A sets the time for sending the reverse beacon broadcast to KEEPALIVE-A. The value of A indicates the changing time until the reverse beacon is sent. Client A will not originate a reverse beacon broadcast until the th-ner is started by the overheard RBB ...at block 796.

For one embodiment, the Level One client. receives a dummy reverse beacon broadcast from the server, to initialize its clock. For one embodiment, the KEEPALIVE period for each... ...varied by a small jitter factor,. to prevent all clients at the same level from broadcasting at the same time. In this way, the reverse beacon is propagated up through the clients, and each client only sends a single reverse beacon broadcast in a single cycle. The length of the cycle may be set arbitrarily. For one...are other branches, and only the server has a path to all of the branches.

Broadcast range 920 is illustrated for client C17. As can be seen, the broadcasts of client C17 are received by many clients, including some clients that are on other... ...However, the clients who are on other branches, i.e. C23 and C14, ignore the broadcast from C17, since they already have a shorter path to the server. The three clients that have C17 as their default gateway are all reached by the broadcast.

Routing tables 930, 940 further illustrate the reduction in communication resulting from dividing the system... ...more beacons rebroadcast one modified beacon, with the data of the client attached. Although the broadcasts are shown as individual arrows to the clients, the broadcasts are general, to all clients within reach.

Note that certain clients, for example, client 1 ...

Claims:

1 A method of wireless connectivity comprising:
broadcasting a beacon by a server; andreceiving and storing the beacon at the client, the... ...the beacon representing the optimal path.
3 The method of claim 1, wherein the beacon broadcast by the server
includes a hop-count set to zero, the method further comprising:each... ...number of hops in this path.
4 The method of claim 1, wherein the beacon broadcast by the server
includes server address, such that each client receiving the beacon knows the... ...19 A server for wireless communications comprising:a beacon logic to generate a beacon and broadcast the beacon; anda wireless transceiver to receive a plurality of reverse beacons, the reverse... ...receiving a beacon from the server;rebroadcasting one beacon received from an upstream node; andbroadcasting a reverse beacon upstream, the reverse beacon being addressed to the known upstream node, the... ...downstream from theparticular client.
23 The method of claim 21, further comprising the server broadcasting a
dummy reverse beacon to initiate the reverse beacon cycle.
24 The method of claim... ...beacon including the aggregated information. . The method of claim 21, wherein receiving a reverse beacon broadcast by a client's default gateway triggers the client to start a timer to send...